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10/599,360	09/26/2006	Stephan Oliver Mictens	FR 040037	7314
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EXAMINER				
HOLDER, ANNER N				
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2483				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/599,360

**Applicant(s)**

MIETENS, STEPHAN OLIVER

**Examiner**

ANNER HOLDER

**Art Unit**

2483

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 September 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-11 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 26 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-945)  
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities: applicant claims priority to a European application and a PCT with national stage entry. Applicant should include in specification a section titled either priority or Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.

Appropriate correction is required.

### ***Claim Objections***

3. Claims 7-9 are objected to because of the following informalities: The language of claims 7-9 recite a method which are dependant from claim 6 which recites a program. Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claim 6 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The application of the method of claim 1 as recited in claim 6 is software and thus is non-statutory subject matter.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
8. Claim element "estimating means, provided for estimating; generating means, provided for generating, transforming and quantizing means, provided for applying, computing means, provided for computing, defining means, provided for defining; storing means, provided for storing" is a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. However, the written description fails to disclose the corresponding structure, material, or acts for the claimed function. \*The

applicant fails to provide support within the disclosure for the limitations recited above of a structure, material, or acts for performing the claimed function and clearly linking or associating the structure, material, or acts to the claimed function.

Applicant is required to:

(a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or

(b) Amend the written description of the specification such that it expressly recites what structure, material, or acts perform the claimed function without introducing any new matter (35 U.S.C. 132(a)).

If applicant is of the opinion that the written description of the specification already implicitly or inherently discloses the corresponding structure, material, or acts so that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function, applicant is required to clarify the record by either:

(a) Amending the written description of the specification such that it expressly recites the corresponding structure, material, or acts for performing the claimed function and clearly links or associates the structure, material, or acts to the claimed function, without introducing any new matter (35 U.S.C. 132(a)); or

(b) Stating on the record what the corresponding structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

10. Claims 1-3 and 6-8 are rejected under 35 U.S.C. 102(a) as being anticipated by Wells US 7,068,722.

11. As to claim 1, Wells teaches a video processing method provided for processing an input image sequence consisting of successive frames, [abstract; fig. 2 (100); fig. 3 (202); figs 5-7; col. 5 lines 14-19] said processing method comprising for each successive frame the steps of: a) preprocessing each successive current frame [fig. 3 (204); col. 5 lines 31-49] by means of the sub-steps of: computing for each frame a so-called content-change strength (CCS); [fig. 3 (214); col. 5 line 67 - col. 6 line 12; col. 6 lines 25-40, 52-67] defining from the successive frames and the computed content-change strength the structure of the successive frames to be processed; [fig. 3; col. 6 lines 4-40; fig. 7; col. 8 lines 25-38] b) processing said pre-processed frames; [fig. 3; abstract; fig. 2; fig. 5; col. 8 lines 13-21] wherein said CCS indication is re-used in a video content analysis step providing an additional input for a detection of any feature of said content. [figs. 2-3; col. 3 lines 51-67; col. 4 lines 20-27; col. 2 lines 14-30; col. 3 lines 31-67; col. 6 lines 120-51]

12. As to claim 2, Wells teaches in which each frame is itself subdivided into sub-structures. [col. 1 lines 12--60; col. 6 lines 39-41, MPEG based system]
13. As to claim 3, Wells teaches in which said sub-structures are blocks. [col. 1 lines 12--60; col. 6 lines 39-41, MPEG based system]
14. As to claim 6, Wells teaches the application [col. 10 lines 4-13, implemented in software] of the method of claim 1 to the implementation of a video encoding method provided for encoding an input image sequence consisting of successive frames, [abstract; fig. 2 (100); fig. 3 (202); figs 5-7; col. 5 lines 14-19] said encoding method [fig. 3; col. 5 lines 31-49] comprising for each successive frame the steps of: a) preprocessing each successive current frame by means [fig. 3 (204); col. 5 lines 31-49] of the sub-steps of: computing for each frame a so-called content-change strength (CCS); defining from the successive frames and the computed content-change strength the structure of the successive frames to be encoded; [fig. 3; col. 5 lines 31-49; col. 6 lines 4-40; fig. 7; col. 8 lines 25-38] storing the frames to be encoded in an order modified with respect to the order of the original sequence of frames; b) encoding the re-ordered frames; [fig. 3; col. 5 lines 31-49; fig. 7; col. 8 lines 25-38] wherein said CCS indication is re-used in a video content analysis step providing an additional input for a detection of any feature of said content. [figs. 2-3; col. 3 lines 51-67; col. 4 lines 20-27; col. 2 lines 14-30; col. 3 lines 31-67; col. 6 lines 120-51]
15. As to claim 7, Wells teaches in which each frame is itself subdivided into sub-structures. [col. 1 lines 12--60; col. 6 lines 39-41, MPEG based system]

16. As to claim 8, Wells teaches in which said sub-structures are blocks. [col. 1 lines 12--60; col. 6 lines 39-41, MPEG based system]

***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 4, 5, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wells US 7,068,722 in view of Holt et al. US 7,362,374.

19. As to claim 4, Wells teaches the method according to claim 2.

Wells does not explicitly teach in which said sub-structures are objects of any kind of shape.

Analogous art, Holt teaches sub-structures are objects of any kind of shape. [fig. 7 (710); col. 5 lines 59-66]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the object based subdividing of Holt with the image processing system of Wells allowing for improved image quality.

20. As to claim 5, Wells teaches the method according to claim 2.

Wells does not explicitly teach in which said sub-structures are segments.

Analogous art, Holt teaches in which said sub-structures are segments. [fig. 7 (710); col. 5 lines 59-66]



It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the object based subdividing of Holt with the image processing system of Wells allowing for improved image quality.

21. As to claim 9, Wells teaches the method according to claim 7.

Wells does not explicitly teach in which said sub-structures are objects of any kind of shape.

Analogous art, Holt teaches sub-structures are objects of any kind of shape. [fig. 7 (710); col. 5 lines 59-66]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the object based subdividing of Holt with the image processing system of Wells allowing for improved image quality.

22. As to claim 10, Wells teaches the method according to claim 7.

Wells does not explicitly teach in which said sub-structures are segments.

Analogous art, Holt teaches in which said sub-structures are segments. [fig. 7 (710); col. 5 lines 59-66]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the object based subdividing of Holt with the image processing system of Wells allowing for improved image quality.

23. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wells US 7,068,722 in view of Komaki US 2002/0048389.

24. As to claim 11, Wells teaches A video encoding device [fig. 3 (200)] provided for encoding an input image sequence consisting of successive groups of frames in which each frame is itself subdivided into blocks, [abstract; fig. 2 (100); fig. 3 (202); figs 5-7; col. 5 lines 14-49; col. 1 lines 12--60; col. 6 lines 39-41, MPEG based system] said encoding device [fig. 3 (200)] comprising the following means, applied to each successive frame: a) preprocessing means, [fig. 3 (204), (214)] applied to each successive current frame; [fig. 3 (204); col. 5 lines 14-48] b) estimating means, [fig. 3 (206)] provided for estimating a motion vector for each block; [fig. 3 (206); col. 5 lines 31-41] said preprocessing means comprising itself the following means: computing means, [fig. 3 (214)] provided for computing for each frame a so-called content-change strength (CCS); [fig. 3 (214); col. 5 line 67 - col. 6 line 12; col. 6 lines 25-40, 52-67] defining means, provided for defining from the successive frames and the computed content-change strength the structure of the successive groups of frames to be encoded; [fig. 3; col. 6 lines 4-40; fig. 7; col. 8 lines 25-38] storing means, [fig. 3 (212)] provided for storing the frames to be encoded in an order modified with respect to the order of the original sequence of frames; [fig. 3 (200); fig. 7; col. 5 lines 42-62; col. 8 lines 25-38] wherein said CCS indication is re-used in a video content analysis step providing an additional input for a detection of any feature of said content. [figs. 2-3; col. 3 lines 51-67; col. 4 lines 20-27; col. 2 lines 14-30; col. 3 lines 31-67; col. 6 lines 120-51]

Wells does not explicitly teach c) generating means, provided for generating a predicted frame on the basis of said motion vectors respectively associated to the

blocks of the current frame; d) transforming and quantizing means, provided for applying to a difference signal between the current frame and the last predicted frame a transformation producing a plurality of coefficients and followed by a quantization of said coefficients; e) coding means, provided for encoding said quantized coefficients.

Analogous art, Komaki teaches c) generating means [fig. 3 (116)], provided for generating a predicted frame on the basis of said motion vectors respectively associated to the blocks of the current frame; [fig. 3 (116); ¶ 0039; ¶ 0046] d) transforming [fig. 3 (103)] and quantizing means, [fig. 3 (104)] provided for applying to a difference signal between the current frame and the last predicted frame a transformation producing a plurality of coefficients and followed by a quantization of said coefficients; [fig. 3; ¶ 0040-0042] e) coding means [fig. 3 (105)], provided for encoding said quantized coefficients. [fig. 3; ¶ 0041]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the encoding teachings of Komaki with the encoding system of Wells allowing for improved coding efficiency and image quality.

### ***Conclusion***

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANNER HOLDER whose telephone number is (571)270-1549. The examiner can normally be reached on M-W, M-W 8 am-3 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Ustaris can be reached on 571-272-7383. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Anner Holder/  
Examiner, Art Unit 2483